EPAC 2006 Abstract

Title **Intrabeam Scattering Studies for the ILC Damping Rings Using a New Matlab Code**

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Abstract A new code to calculate the effects of intrabeam scattering (IBS)has been developed in Matlab based on the approximation suggested by K. Bane*. It interfaces with the Accelerator Toolbox** but can also read in lattice functions from other codes. The code has been benchmarked against results from other codes for the ATF*** that use this approximation or do the calculation in a different way. The new code has been used to calculate the emittance growth due to intrabeam scattering for the lattices currently proposed for the ILC Damping Rings, as IBS is a concern, especially for the electron ring. A description of the code and its user interface, as well as results for the Damping Rings, will be presented.

Word Count: 119 Character Count: 701

Footnote * K. Bane, in Proceedings of EPAC2002, p.1443.
** A. Terebilo, Accelerator Toolbox for MATLAB, SLAC-PUB-8732 and www-ssrl.slac.stanford.edu/at/.
*** K. Kubo et al., PhysRevST AB.8.081001 (2005).

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